

VERTIV RS500 Liebert GXT5 Lithium Ion UPS Owner's Manual

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VERTIV RS500 Liebert GXT5 Lithium-Ion UPS



Specifications:

Power Capacity: 1000 – 3000VA

Input Voltage: 120V

• Topology: Double Conversion Online UPS

· Battery Type: Lithium-Ion

Output Power Factor (PF): 0.9 or betterWarranty: Standard 5-year warranty

Product Information:

The Liebert GXT5 Lithium-Ion UPS offers high performance online power protection with a rack/tower convertible design. It features a Lithium-Ion battery that provides longer life, lowest total cost of ownership, and is smaller and lighter compared to traditional batteries. The UPS protects against a wide range of power fluctuations and ensures seamless operation during power loss.

Key Features:

- · Converts between rack and tower form factor
- · Low maintenance and ideal for remote locations
- Internal batteries with industry-leading runtime
- Lithium-lon battery technology for better performance

Product Usage Instructions

Installation:

- 1. Choose whether to install the UPS in a rack or tower configuration based on your setup.
- 2. Connect the input power source to the UPS.
- 3. Connect the output load to the UPS.
- 4. Ensure proper ventilation around the UPS for heat dissipation.

Battery Replacement:

To replace the batteries:

- 1. Turn off the UPS and disconnect the input power.
- 2. Open the battery compartment following the manufacturer's guidelines.
- 3. Replace the batteries with compatible ones.
- 4. Close the battery compartment securely.
- 5. Turn on the UPS and monitor for proper operation.

FAQ

Q: Why should I choose Lithium-Ion Technology for my UPS?

A: Lithium-Ion batteries offer longer life, lower total cost of ownership, and are smaller and lighter compared to traditional batteries. They also provide better performance in high temperature environments.

Q: How do I calculate cost savings with the Liebert GXT5 Lithium-Ion UPS?

A: You can use the provided models and tools to calculate the cost savings for your installation based on factors like battery life, recharge time, and total cost of ownership.

The Vertiv™ Liebert® GXT5 Lithium-Ion UPS provides the highest level of power protection for your business-critical IT applications.

High Performance Online Power Protection

The Liebert® GXT5 Lithium-Ion double conversion online UPS provides both the highest level of power conditioning and battery backup for business-critical IT equipment such as business network gear and servers ensuring your mission-critical applications are protected in the event of an unanticipated loss of power or an unprecedented power surge. The Liebert GXT5 Lithium-Ion UPS protects against the widest range of powerfluctuations and automatically switches to battery backup when power loss is detected. With a 0.9 or better output power factor (PF) and no transfer time to operation on battery, you can ensure your most critical assets are protected

Protects Against



The rack/tower convertible design of the Liebert GXT5 Lithium-Ion UPS makes it ideal for edge or distributed IT applications where floor space is at a premium. It is a true low-maintenance, set-it-and-forget-it solution ideal for remote locations with limited onsite technical resources

Vertiv Liebert GXT5 Lithium-Ion Overview

- 1000VA, 1500VA, 2000VA, & 3000VA UPSs in a rack/tower convertible form factor
- Standard 5-year warranty provides peace of mind that your investment is protected against potentially costly
 equipment failures
- Achieve the lowest total cost of ownership over the lifetime of the UPS with fewer battery replacements and up to 10 years of useable life
- Hot-swappable, user-replaceable batteries increase the useable life of the UPS by allowing you to easily replace the batteries without disrupting power to connected equipment
- Internal batteries offer industry-leading runtime (up to 14 minutes at full load) to protect critical equipment during an unexpected power loss
- Lithium-Ion battery technology offers better performance in high-temperature environments, supports up to 10 times more discharge cycles, and delivers faster recharge times compared to VRLA batteries

Why should you choose Lithium-Ion Technology?



Lithium-ion technology delivers up to 3 times the life expectancy of lead-acid batteries and lowers the total cost of ownership by nearly half

Lithium-Ion Outperforms VRLA when compared...

| Battery Feature | VRLA Battery | Lithium-Ion Battery | Lithium-Ion Benefit |
|-------------------------------|--------------|---------------------|---|
| Standard battery life | 3-5 years | 8-10 years | Up to 3 times longer life |
| Typical cycle life | 200-260 | 2000 | Up to 10x more discharge/recharge cycles |
| Battery recharge time (@ 90%) | 3-6 hours | <2 hours | Fast recovery time safeguards your critical IT equipment in the event of multiple outages |
| Battery weight | 10.9 kg | 5.9 kg | 45% lighter making it ideal for small spaces and wall-mount racks |
| Warranty | 2 or 3 years | 5 years | Worry free operation so you can set-it and forget-it |

Visit the TCO calculator at vertiv.com -> Products & Services -> UPS -> GXT5 Lithium -> Models to calculate the cost savings for your installation.

Build Your Total Infrastructure Solution with Vertiv

Discover expert-designed IT infrastructure solutions with proven success in diverse environments and countless applications.



High Performance



0.9 (or Better) Output Power Factor (PF): Provides more useable power enabling you to connect more equipment saving you money and space.

Increased Runtime: Internal batteries offer up to 14 minutes of runtime at full load.



Programmable Outlet Group: Extend run time when on battery power by power-cycling connected equipment and shedding less critical loads.

Battery Backed Outlets: Up to 7 battery backed outlets ensuring critical equipment is protected.



Advanced Warning Status: Receive early audible and visual alarms warning you of system status to alert you to an input voltage, output overload, low battery, or battery replacement condition.

Wide Input Voltage Range: Prolong battery life by allowing the UPS to maximize the use of the utility power before transferring to battery.

Superior Battery Technology



- Fewer Battery Replacements: Lithium-Ion batteries require fewer battery replacements and last on average up to 3 times as long as traditional VRLA batteries reducing maintenance, labor, and replacement costs (lower TCO).
- More Discharge Cycles: Lithium-Ion batteries deliver up to 10 times more charge / discharge cycles than VRLA

batteries.

- Fast Recharge: Lithium-Ion batteries recharge twice as fast as traditional VRLA batteries getting you back to 90% in as little as 2 hours.
- Hot-Swappable, User-Replaceable Batteries: Increase product life and reliability with batteries that can be easily replaced without disrupting power to connected equipment.
- Safe and Reliable: Safest Lithium-Ion (LiFePO4) battery chemistry and integrated battery management system (BMS) ensure safe and reliable operation.
- Environmentally Friendly: Significantly reduce battery disposal and recycling with lower replacement rates.

Enhanced Manageability

- LCD Display: User-friendly full-color LCD interface with gravity sensing orientation simplified installation and configuration while also providing instant at-a-glance status and insights.
- Free Power Management Software:
 - Vertiv[™] Power Insight Add the Vertiv[™] Liebert® RDU101 card for web/SNMP manageability
 - Vertiv[™] Power Assist Monitor UPS conditions through a local USB connection
 - Vertiv[™] Intelligence Director Together with Vertiv[™] Geist[™] rPDU one single IP Address to monitor and manage up to 50 devices

Remote Monitoring and Management: Add an optional Vertiv[™] Liebert® IntelliSlot[™] RDU101 communication card to enable remote monitoring/management (web-based, SNMP, BACnet, MODBUS and relay contacts) and environmental monitoring via external sensors.

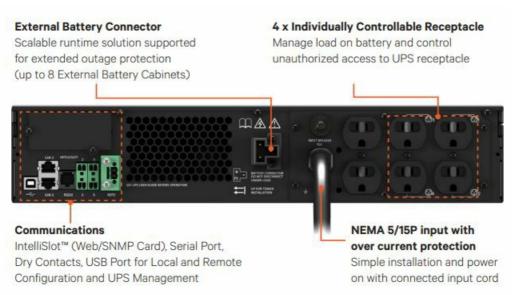
Remote Emergency Power Off: Remotely shut the UPS during an emergency

Features

Vertiv™ Liebert® GXT5 Lithium-Ion Features



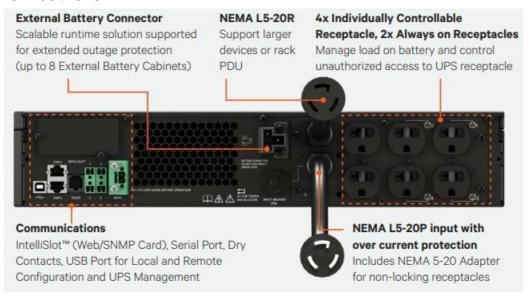
• 1000-1500VA - 120V Rack/Tower



• 2000VA - 120V Rack/Tower



• 3000VA - 120V Rack/Tower



Technical Specifications

Technical Specifications | 1000 VA - 3000 VA, 120V, Rack/Tower Convertible

| Standard Models Models with RDU101 Network Card | GXT5LI-1000LVRT2UXL GXT5LI-1000LVRT2UXLN | GXT5LI-1500LVRT2UXL GXT5LI-1500LVRT2UXLN | GXT5LI-2000LVRT2UXL GXT5LI-2000LVRT2UXLN | GXT5LI-3000LVRT2UXL GXT5LI-3000LVRT2UXLN |
|--|--|--|--|--|
| Form Factor | 2U Rack/Tower | 2U Rack/Tower | 2U Rack/Tower | 2U Rack/Tower |
| Power Rating | 1000VA / 1000W | 1500VA / 1350W | 2000VA / 1800W | 3000VA / 2700W |
| Dimensions, W X D X H, IN (MM) | | | | |
| Unit | 16.9 x 17.3 x 3.4 (430 x 446 x 85) | 16.9 x 18.7 x 3.4 (430 x 476 x 85) | 16.9 x 18.7 x 3.4 (430 x 476 x 85) | 16.9 x 21.5 x 3.4 (430 x 546 x 85) |
| Shipping | 22.4 x 23.5 x 9.5 (570 x 597 x 242) | 22.4 x 23.5 x 9.5 (570 x 597 x 242) | 22.4 x 23.5 x 9.5 (570 x 597 x 242) | 22.4 x 28.2 x 9.5 (570 x 717 x 242) |
| Weight, LB (KG) | | | | |
| Unit | 37.5lbs (17kg) | 39.7lbs (18kg) | 39.7lbs (18kg) | 48.5lbs (22kg) |
| Shipping | 47.6lbs (21.6kg) | 52.9lbs (24kg) | 52.9lbs (24kg) | 59.7lbs (27.1kg) |
| Input/Output AC Parameters | | | | |
| Input Plug | NEMA 5-15P | NEMA 5-15P | NEMA L5-20P | NEMA L5-30P |
| Input Cord | 10ft (3m) Atttached | 10ft (3m) Attached) | 10ft (3m) Attached L5-20 To 5-20P Adapter | 10ft (3m Attached) |
| Total Receptacles | (6) NEMA 5-15R | (6) NEMA 5-15R | (1) NEMA L5-20R, (6) NEMA 5-15/20R | (1) NEMA L5-30R, (6) NEMA 5-15/20R |
| Programmable Receptacles | (4) NEMA 5-15R | (4) NEMA 5-15R | (4) NEMA 5-15/20R | (4) NEMA 5-15/20R |
| Nominal Voltage Setting | 120VAC Default; 100/110/115/120V/125VAC (User-Configurable) | 120VAC Default; 100/110/115/120V/125VAC (User-Configurable) | 120VAC Default; 100/110/115/120V/125VAC (User-Configurable) | 120VAC Default; 100/110/115/120V/125VAC (User-Configurable) |
| Voltage Range Without Battery Operation | Nominal (Full Load): 102 - 150 VAC; Maximum: 60 - 150 VAC | Nominal (Full Load): 102 - 150 VAC; Maximum: 60 - 150 VAC | Nominal (Full Load): 102 - 150 VAC; Maximum: 60 - 150 VAC | Nominal (Full Load): 102 - 150 VAC; Maximum: 60 - 150 VAC |
| Frequency Range | 40~70Hz | 40~70Hz | 40~70Hz | 40~70Hz |
| Surge Protection | ANSI C62.41, Category B |
| Transfer Time | 0 ms | 0 ms | 0 ms | 0 ms |
| Battery Waveform | Pure Sine Wave | Pure Sine Wave | Pure Sine Wave | Pure Sine Wave |
| Battery Parameters | | | | |
| Туре | Lithium-Ion (LiFePO4) | Lithium-lon (LiFePO4) | Lithium-lon (LiFePO4) | Lithium-Ion (LiFePO4) |
| Recharge Time (from full discharge) | < 2 hrs to 90% |
| Full-Load Runtime | 13 min | 14 min | 10.5 min | 6.5 min |
| Half-Load Runtime | 28 min | 28 min | 22.5 min | 15 min |
| External Battery Cabinet | VEBCLI-48VRT1U | VEBCLI-48VRT1U | VEBCLI-48VRT1U | VEBCLI-48VRT1U |
| Environmental | | | | |
| Environmental | 32°F to 104°F (0°C to 40°C) (10% Derating | 32°F to 104°F (0°C to 40°C) (10% Derating | 32°F to 104°F (0°C to 40°C) (10% Derating | 32°F to 104°F (0°C to 40°C) (10% Derating |
| Operating Temperature,°F (°C) | at 50°C) | at 50°C) | at 50°C) | at 50°C) |
| Storage Temperature °F (°C) | -4° to 140° (-20° to 60°) |
| Relative Humidity | 0% - 95%, non-condensing | 0% - 95%, non-condensing | 0% – 95%, non-condensing | 0% - 95%, non-condensing |
| Operating Altitude, ft (m) | 0 to 10,000 (0 to 3,000) w/o Derating (15% Derating at 4000m) | 0 to 10,000 (0 to 3,000) w/o Derating (15% Derating at 4000m) | 0 to 10,000 (0 to 3,000) w/o Derating (15% Derating at 4000m) | 0 to 10,000 (0 to 3,000) w/o Derating (15% Derating at 4000m) |
| Audible Noise | < 48 dB | < 48 dB | < 48 dB | < 48 dB |
| Certifications | | | | |
| Safety | UL 1642 (Li-Ion Battery Cells), UL 1973 (Li-Ion Battery Pack w/UPS), UL 1778, CSA 22.2 No. 107.3 | UL 1642 (Li-Ion Battery Cells), UL 1973 (Li-Ion Battery Pack w/UPS), UL 1778, CSA 22.2 No. 107.3 | UL 1642 (Li-Ion Battery Cells), UL 1973 (Li-Ion Battery Pack w/UPS), UL 1778, CSA 22.2 No. 107.3 | UL 1642 (Li-lon Battery Cells), UL 1973 (Li-lon Battery Pack w/UPS), UL 1778, CSA 22.2 No. 107.3 |
| Agency | UL 1778, c-UL, NOM, FCC Part 15, Class A | UL 1778, c-UL, NOM, FCC Part 15, Class A | UL 1778, c-UL, NOM, FCC Part 15, Class A | UL 1778, c-UL, NOM, FCC Part 15, Class A |
| Environmental | RoHS2 / REACH / WEEE |
| Network Surge | IEC 61000-4-5, ANSI C62.41, Category B |
| | | | | |
| Transportation | ISTA Procedure 2A | ISTA Procedure 2A | ISTA Procedure 2A | ISTA Procedure 2A |
| Transportation Warranty | ISTA Procedure 2A 5 years on UPS and Battery | ISTA Procedure 2A 5 years on UPS and Battery | ISTA Procedure 2A 5 years on UPS and Battery | ISTA Procedure 2A 5 years on UPS and Battery |

Optional Accessories

External battery cabinets and replacement battery kits



| UPS | External battery cabinets* | Internal Replacement Battery Kits |
|---------------------|----------------------------|-----------------------------------|
| GXT5LI-1000LVRT2UXL | VEBCLI-48VRT1U | GXT5LI-48VBATKIT1 |
| GXT5LI-1500LVRT2UXL | VEBCLI-48VRT1U | GXT5LI-48VBATKIT2 |
| GXT5LI-2000LVRT2UXL | VEBCLI-48VRT1U | GXT5LI-48VBATKIT2 |
| GXT5LI-3000LVRT2UXL | VEBCLI-48VRT1U | GXT5LI-48VBATKIT2 |

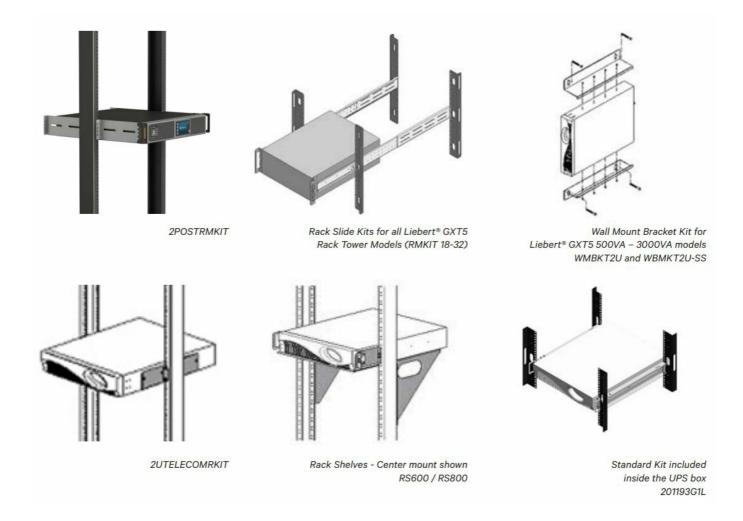


| Network Communications | RDU101 | Intellislot™ web card for SNMP and web management. Supports environmental sensors. | |
|---------------------------|---|--|--|
| | IS-RELAY | Intellislot™ Interface Kit for Relay Contacts | |
| Environmental Sensors | SN-Z01 | Integrated cable with single temperature sensor | |
| | SN-Z02 | Integrated cable with three temperature sensors | |
| | SN-Z03 | Integrated cable with three temperature and one humidity sensors | |
| | SN-T | Modular with single temperature sensor | |
| | SN-TH | Modular with single temperature and single humidity sensor | |
| | SN-2D | Modular with two door contact inputs | |
| | SN-3C | Modular with three dry contact inputs | |
| | SN-L20 | Modular leak zone sensor with 20 foot cable (Liebert® RDU-S only) | |
| UPS manageability options | Vertiv™ Power Insight Software Management | Vertiv™ Power Insight is a complimentary web-based software designed to monitor up to 100 Vertiv™ UPSs and rPDUs | |

MicroPOD – Maintenance bypass and output distribution



| UPS VA rating | POD model number | Output receptacles | Plug to utility | |
|----------------|------------------|--|-----------------|--|
| 500-1500VA UPS | MP2-115HW | Hard Wired | Hardwired | |
| | MP2-115A | 8 x 5-15R | 5-15P | |
| 2000VA UPS | MP2-120HW | Hard Wired | Hardwired | |
| | MP2-120C | 8 x 5-15/20R | 5-20P | |
| | MP2-120E | 4 x 5-15/20R; 1 x L5-20R | 5-20P | |
| 3000VA UPS | MP2-130HW | Hard Wired | Hardwired | |
| | MP2-130C | 8 x 5-15/20R | L5-30P | |
| | MP2-130E | 2 x 5-15/20R; 1 x L5-30R; 4 x 5-15/20R | L5-30P | |
| | MP2-130P | 4 x 5-15R; 2 x L5-20R | L5-30P | |



Mounting Kit

Mounting Kit Options

| Application | Model Supported | Style | Model | Description |
|-----------------------|--|---------|---------------|--|
| 2 Post - Telecom Rack | Entire Liebert GXT5 UPS family (500VA to 10kVA) | Shelf | RS500 | Flush-mount shelf for 19" rack wide |
| | | Shelf | RS600 | Center-mount shelf for 19" rack wide |
| | | Shelf | RS700 | Flush-mount shelf for 23" rack wide |
| | | Shelf | RS800 | Center-mount shelf for 23" rack wide |
| | Liebert® GXT5 up to 3kVA | Bracket | 2UTELECOMRKIT | Only center-mount bracket for 19" rack wide |
| | | Bracket | 2POSTRMKIT | Front flush/ center-mount bracket - 4-piece design |
| Wall Mount | Liebert GXT5 up to 3kVA | Bracket | WMBKT2U | Wall mount bracket holds (1) Liebert® GXT5 2U or (1) Liebert® PSI5 2U product, steel painted black |
| | | Bracket | WMBKT2USS | Wall mount bracket holds (1) Liebert GXT5 2U or (1) Liebert PSI5 2U product, stainless steel |
| 4 Post Rack | Entire Liebert GXT5 UPS family (500VA to 10kVA) | Bracket | RMKIT18-32 | Cabinet/racks with 18" - 32" deep support rails - Telescopic rail |

Note: RS600 and RS800 kits include adapter brackets for installation of up to (2) Liebert® GXT5 2U model

Power Assurance Package

Comprehensive Service Support for Critical Systems

- Five-year protection plan with 100% parts coverage and 24×7 emergency service
- On-site installation and startup of UPS and internal batteries (excludes hard-wired applications); configuration

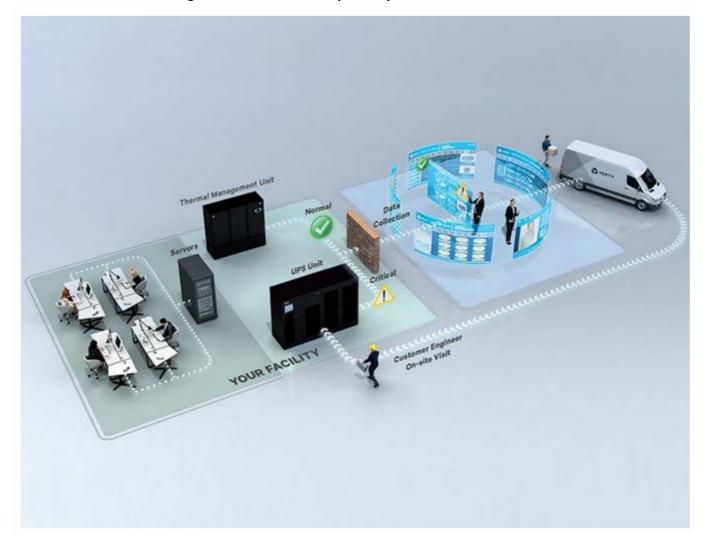
of new UPS and accessories; and if purchased, safe removal and disposal of legacy UPS and batteries

- On-site service support is available 24x7 (within 150 miles of the regional service center) and includes 100% labour and travel coverage
- 100% parts coverage for UPS includes POD (power output distribution), web card, and battery defects
- 24×7 access to the customer resolution centre and online access to Customer Services Network

Key benefits:

- Hassle-free management of multi-site rollouts
- Frees up IT staff from maintaining and servicing UPS equipment reduces the worry of critical equipment downtime
- Ensures rapid recovery in the event of failure (within 24-48 hours)
- Frees you from the responsibility of handling and documenting the disposal of legacy UPS and batteries

Vertiv™ LIFE™ Remote Diagnostic Services for Rapid Response



Uptime assurance

- · Continuous monitoring for early detection of trends and operating anomalies
- Analysis and interpretation of alarm and status messages

Rapid incident response

- · Automatic transmission of data for analysis
- · Concurrent diagnosis and dispatch of engineer to site
- · Shipment of parts for corrective maintenance

Increased insight and ease of management

- · Notification of operating conditions that may impact system health
- · Periodic trend and analysis reports
- · Integration of remote and on-site services to ensure business continuity

Vertiv™ Liebert® GXT5 Lithium-Ion UPS – Power Assurance Services

Power Assurance Package

| Bundled Start-up Service AND 5-Year On-site Emergency Response | Standard | With LIFE™ Services | With Removal | With LIFE™ and Remova |
|---|--------------------|---------------------|---------------------|-----------------------|
| Equipment Model / Type | Part Number | Part Number | Part Number | Part Number |
| Liebert® GXT5 LI UP TO 3 KVA | PAPGXTLI-1K3K | PAPGXTLI-1K3KLF | PAPGXTLI-1K3KRMV | PAPGXTLI-1K3KRLF |
| External Battery Cabinets (48V) | PAPGXTLI-48VBATT | N/A | PAPGXTLI-48VBATTRMV | N/A |
| Power Startup Services | | | | |
| Startup Service Only | Standard | | With Removal | |
| Equipment Model / Type | Part Number | | Part Number | |
| Liebert GXT5 LI UP TO 3 KVA | SUGXT-1K3K | | SUGXT-1K3KRMV | |
| External Battery Cabinet (48V) | SUGXT-EXTBTCB | | SUGXT-EXTBTCBRMV | |
| Power Emergency Services | | | | |
| 5-Year On-site Emergency Coverage - Only | Standard | | With LIFE Services | |
| Equipment Model / Type | Part Number | | Part Number | |
| Liebert® GXT5 LI 1-3 KVA | PEPGXTLI-1K3K5YR | | PEPGXTLI-1K3KLF | |
| Lithium-Ion External Battery Cabinet 48V | PEPGXTLI-48VBAT5YR | | N/A | |

Power Assurance Package – Summary

• Includes all below "Power Start-up Services" and "Power Emergency Services" support

Power Startup Services – Summary

- Installation includes mounting and start-up of new UPS or EBC (excludes hard-wired applications)
- · Services performed by Vertiv factory-trained technician
- Services performed 7 X 24, excluding national holidays within the 48 contiguous states and Hawaii
- · Removal and disposal of existing UPS or EBC equipment, if selected

Power Emergency Services – Summary

- On Site Service Support
- Full-service five (5) year contract term commencing upon the start-up date
- 100% parts coverage, including POD, web card and battery defects
- 100% labor and travel coverage 7 days/week, 24 hours/day
- 24-Hour Customer Resolution Center via 1-800-LIEBERT
- Access to Customer Services Network portal

Vertiv™ LIFE™ Services includes above plus:

• Continuous Monitoring, Alarm Notification, Expert Analysis, and Proactive Response

Note: LIFE™ Services requires an RDU101 card.

Please refer to the Scopes of Work for full and additional details.

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Documents / Resources



VERTIV RS500 Liebert GXT5 Lithium Ion UPS [pdf] Owner's Manual GXT5LI-1500LVRT2UXL, RS500 Liebert GXT5 Lithium Ion UPS, RS500, Liebert GXT5 Lithium Ion UPS, GXT5 Lithium Ion UPS, Ion UPS, UPS

References

- Vertiv Official Web Site
- User Manual

Manuals+, Privacy Policy

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